for "approximately" does not render it indefinite, as exemplified by claim 10 of United States Patent No. 5,875,205, wherein the word "approximately" is used in exactly the same manner as the word "substantially" in claim 1 of that patent. The term "substantially" is also used in claim 11, line 17 of United States Patent No. 5,875,205. The word "substantially" also is used in claim 1, line 3 of United States Patent No. 5,327,443 (Reference AF in the Information Disclosure Statement as well as in claim 3, lines 3-4 of that patent.

The term is even used in the reference cited by the Examiner (Barnett et al, United States Patent No. 3,703,656 in claim 7, lines 3-4).

This term therefore clearly has a long history of standard and conventional usage in the claim language of United States patents, and its presence in the above examples (which are but a few of hundreds of thousands of examples) clearly demonstrates that its usage is acceptable under the provisions of 35 U.S.C. §112, second paragraph. Withdrawal of this rejection is therefore respectfully requested.

Claims 1-6, 8-12 and 15-22 were rejected under 35 U.S.C. §102(b) as being anticipated by the aforementioned Barnett et al reference. This rejection is respectfully traversed for the following reasons.

The Examiner cited column 1, lines 1-10 of the Barnett et al reference as allegedly disclosing a monolithic semiconductor laser diode array, however, clearly there is no such disclosure whatsoever in the entirety of the Barnett et al patent. The Barnett et al patent is directed exclusively to the use of light emitting diodes, which are in no manner the same as, or comparable to, a laser diode. Those of ordinary skill in the art are fully aware of the fundamental differences in operation and structure between light emitting diodes and laser diodes, and the Barnett et al

reference does not include any teachings whatsoever regarding the use of laser diodes, as disclosed and claimed in the present application.

All of the other references made by the Examiner to alleged teachings in the Barnett et al reference to the arrangement of a laser diode array are therefore equally erroneous, since all of the teachings cited by the Examiner in Barnett et al refer instead to light emitting diodes.

For this reason alone, independent claim 1 and the claims depending therefrom are not anticipated by Barnett et al.

The matrix-addressable light-emitting diodes disclosed in the Barnett et al are in no manner the same as, or equivalent to, laser diodes. The Barnett et al reference provides teachings only regarding p-n light-emitting junctions or diodes 23, as described at column 3, lines 41-53. Those of ordinary skill in the art are well aware that such p-n junctions are incapable of producing and emitting laser radiation.

Moreover, even in the light-emitting diode arrangement disclosed in Barnett et al, there is no teaching of an optical arrangement which is capable of collimating and/or focusing the radiation. The Examiner relied on language at column 4, lines 4-10 of the Barnett et al reference as allegedly providing a teaching for such a function, however, this passage merely describes optical absorbers, and those of ordinary skill in the art are fully aware that such absorbers do not collimate or focus radiation. Moreover, the absorbers do not perform the function of producing a radiation beam of any type, much less a radiation beam having a circular cross-section, but serve only the function of reducing or eliminating undesirable cross-coupling or leakage of light between adjacent light-emitting diodes. There is no teaching in the Barnett et al

reference to produce a radiation beam, of any type, having a substantially circular cross-section, as disclosed and claimed in the present application.

Lastly, the Barnett et al reference does not disclose or suggest any type of covering that encapsulates the substrate on which the light-emitting diodes are disposed. The Examiner cited column 3, lines 54-67 of the Barnett et al reference as providing such a teaching, however, this language merely states that the substrate of the array of light-emitting diodes is transparent, and it is clear that this transparent substrate does not encapsulate the ceramic support in the device disclosed in Barnett et al.

Additionally, however, the Examiner cited teachings in the Barnett et al with respect to claims 2 and 3 contending that the ceramic support 40 in some manner functions as a deflection mirror. Applicants and their counsel are unable to find any teachings at all in the Barnett et al which indicate that the ceramic support 40 has any reflection capabilities at all, and therefore the Examiner's characterization of this element as a "deflection mirror" is not understood.

As to claim 4, the Examiner cited language in the Barnett et al reference at column 2, lines 44-59 regarding the ceramic component 40 having a vapor deposit mirrored surface. It is true that the ceramic element 40 in the Barnett et al has a vapor deposited surface, however, this is nowhere described in the Barnett et al as being a mirrored surface, as required by the language of claim 4.

As noted above, since the Barnett et al reference does not disclose an optical arrangement of laser diodes as defined in claim 1, the Examiner's comments regarding the rejection of claims 8, 9, and 11 based on the teachings of Barnett et al are not supported by the actual language in the Barnett patent.

As to claims 17-19, there is no teaching whatsoever in the Barnett et al that the metallizations 51 are intended to function, or are even capable of functioning, as cooling elements, since they are not in thermal communication with the ceramic carrier 40. Moreover, none of the metallizations 51 include, or form, a Peltier element as set forth in claim 19. Even though the metallizations 51are, of course, in contact with the ceramic carrier 40, there is no teaching et al in the Barnett et al reference that the ceramic carrier 40 is capable of functioning as a cooling element.

Therefore, none of claims 1-6, 8-12 or 15-22 is anticipated by the Barnett et al reference.

Claims 7, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barnett et al. Since each of those claims depends from independent claim 1, which claims an array of laser diodes, and since the Barnett et al reference provides teachings exclusively directed to the use of light emitting diodes, the subject matter of claims 7, 13 and 14 would not have been obvious to a person of ordinary skill in the art based on the teachings of the Barnett et al reference. Those of ordinary skill in the art, knowing the significant differences between laser diodes and light emitting diodes, would not find it obvious to modify the Barnett et al reference to employ laser diodes instead of the light emitting diodes disclosed therein. In fact, the Examiner has not even proposed or suggested that such a substitution would have been obvious to a person of ordinary skill in the art, and Applicants find no basis in the teachings of the Barnett et al reference, nor in the general knowledge possessed by the those of ordinary skill in the art, which would support a conclusion that such a substitution would be obvious. In fact, in view of the significant differences between these two types of components, interchanging

laser diodes and light emitting diodes would be contrary to the conventional thinking of those of ordinary skill in the art.

All claims of the application therefore are submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

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